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**CATEGORICAL EXCLUSION DETERMINATION -  
FEMP PUBLIC WATER SUPPLY TAP-IN NEPA  
DOC. NO. 433**

**10/21/93**

**NEPA DOC. 433  
DOE-FN/DOE-HQ  
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CAT EX**

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

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CATEGORICAL EXCLUSION (CX) DETERMINATION

FEMP Public Water Supply Tap-in  
NEPA Document No. 433  
Fernald Environmental Management Project (FEMP)  
Fernald, Ohio

Proposed Action

The United States Department of Energy (DOE) at the Fernald Environmental Management Project (FEMP) proposes to meet the total potable water demand of the FEMP by tapping into the Hamilton County Department of Public Water Works (HCDPW) proposed Public Water Supply (PWS) system.

Location

The proposed action will occur at several locations within the FEMP. Tap-in to the PWS will occur on Willey Road approximately 0.75 mile west of State Route 128 and about 25 feet west of the present location of the 20-inch South Plume Groundwater Discharge Forcemain (the groundwater discharge pipeline for the South Plume Removal Action). From there, the proposed pipeline will run parallel to and west of the present location of the South Plume Groundwater Discharge Forcemain to the location of the proposed Advanced Wastewater Treatment (AWWT) facility, then turn north and tap into the existing FEMP water supply piping. The 1050 acre FEMP is located in a rural area of southwest Ohio, within Butler and Hamilton Counties, approximately 18 miles northwest of downtown Cincinnati, Ohio.

Background

As a requirement of the 1991 Amended Consent Agreement, a PWS is being partially funded by the DOE to provide Fernald area residents affected, or with the potential to be affected, by the South Plume an alternative water supply. During the design of the PWS system, it was brought to the attention of HCDPW that with the present Fernald area population and commercial development, water transmission times would be unacceptably long based on current standards. By utilizing the presence of a large water user, transmission times could be reduced. Therefore, the HCDPW inquired whether the FEMP would consider becoming a PWS customer.

Presently, potable and non-potable water is produced at the FEMP by the use of on-site well water treated with a cold lime softening method with alum addition. This produces a lime-alum sludge by-product that is deposited into the site's north lime sludge pond. In 1991, it was realized that the pond's remaining capacity was minimal and that a revised course of action would be required. As a result, a non-sludge producing water treatment system, known as the electrodialysis reversal system (EDR), was purchased. However, a concern was raised as to whether the EDR unit was of sufficient size to supply all future FEMP water demands.

These concerns, along with the request by HCDPW, prompted the Water Needs Assessment report for the FEMP, which determined that the optimal alternative for

## **FEMP Public Water Supply Tap-in**

supplying water to the FEMP was to supply the potable water need by tap-in to the planned PWS for the Fernald area. Non-potable water need will be supplied by treating groundwater through the EDR system. This alternative solves the travel time concerns of HCDPW, thus enabling the PWS to proceed as planned. This alternative also solves the lime-alum sludge generation and EDR capacity concerns at the site. In addition, once the AWWT is operational, recycle water from that system will become available to supply the non-potable needs of the FEMP. Until then, both potable and non-potable water would be supplied by the PWS.

### **Description of Proposed Action**

The proposed PWS pipeline is anticipated to be located on the north side of Willey Road, parallel to the southern boundary of the FEMP. Tap-in will occur along Willey Road, west of the South Plume Groundwater Discharge Forcemain. From the tap-in, the pipeline will run parallel to and west of the present location of the South Plume Groundwater Discharge Forcemain to the location of the proposed AWWT. The pipeline will then turn north and tap into the existing FEMP potable water supply piping, north of the Pilot Plant (Building 54A).

All specifications for materials and construction for the pipeline and related equipment to the meter shall conform to present Cincinnati Water Works standards, DOE Order 6430.1A "General Design Criteria," and other applicable standards.

This design will accommodate the Recommended Minimum Public Water Supply Purchase Commitment, as described in the FEMP Water Needs Assessment (e.g., 1,400,000 gallons per week or 200,000 gallons per day average). Fire flows are not designed into this system due to the existence of a separate site fire protection system.

The pipeline will have a diameter of six inches and will be constructed of high density polyethylene with butt-fusion joints. Appurtenances will include a building housing backflow preventers in parallel and a meter at Willey Road, and automatic air release valves (with manhole access) in pipeline highpoints.

Soil excavated during installation of the PWS tap-in pipeline will be radiologically monitored. Any contaminated soil encountered will be dispositioned in accordance with Removal Action No. 17, "Improved Storage of Soil and Debris."

Certain sections along the route of the tap-in pipeline may need to be surveyed for archeological resources. A previous survey for the South Plume Removal Action Forcemain installation has already covered much of the area that the PWS Tap-in entails. Therefore, additional archeological survey should be limited to areas beyond those already surveyed. Any archeological resources found will be collected and archived by the archeological resources curator.

**FEMP Public Water Supply Tap-in****Categorical Exclusion to be Applied**

The authority for finding this project to be subject to NEPA Categorical Exclusion is contained in Subpart D of 10 CFR Part 1021, entitled "National Environmental Policy Act Implementing Procedures and Guidelines." The Final Rule and Notice, effective May 26, 1992, includes a list of Categorical Exclusions that are classes of actions that normally do not require the preparation of either an Environmental Impact Statement or an Environmental Assessment.

The Final Rule and Notice specifically lists in Part 1021, Appendix B to Subpart D, Sec. 1021.410, B6.1, the following as a type of action that is a Categorical Exclusion applicable to Specific Agency Actions:

Removal actions under CERCLA (including those taken as final response actions and those taken before remedial action) and removal-type actions similar in scope under RCRA and other authorities (including those taken as partial closure actions and those taken before corrective action), including treatment (e.g., incineration), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the removal action. These actions will meet the CERCLA regulatory cost and time limits or satisfy either of the two regulatory exemptions from those cost and time limits (National Contingency Plan, 40 CFR part 300).

The proposed PWS Tap-in, as a requirement of the 1991 Amended Consent Agreement, will not violate applicable statutory, regulatory, or permit requirements; it will not require siting and construction or major expansion of waste disposal, recovery, or treatment facilities; and it will not adversely impact any environmentally sensitive areas (e.g., wetlands, floodplains, or the sole-source aquifer).

The proposed action is an essential part of the PWS. NEPA documentation (CX 382) for the PWS was approved by DOE Fernald Field Office on July 16, 1993, using the removal action CX which is quoted above.

**Compliance Action**

I have determined that the proposed action meets the requirements for the CX referenced. Therefore, the proposed action is categorically excluded from further NEPA review and documentation.

Approval: 

J. Phil Hamrig, Manager

U.S. Department of Energy, Fernald Field Office

Date: 10-21-93

United States Government

Department of Energy

Fernald Field Office

# memorandum

DATE: **JUL 21 1994**

DOE-0150-94

REPLY TO

ATTN OF:

FN:Skintik

SUBJECT:

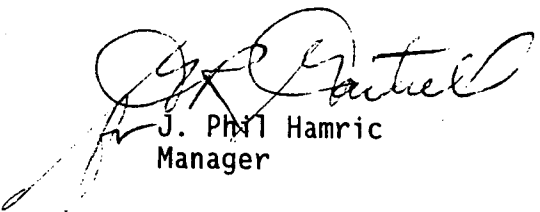
**CATEGORICAL EXCLUSION DETERMINATION (CX 433) PUBLIC WATER SUPPLY TAP-IN**

TO: Carol Borgstrom, EH-25, FORS

The subject categorical exclusion (attachment) under Subpart D of the Department of Energy's National Environmental Policy Act Procedures and Guidelines, 10 CFR 1021, effective May 26, 1992, has been approved and is being forwarded for your review.

The Department of Energy, Fernald Field Office (DOE-FN) requests that you notify us within two weeks, in accordance with the Interim Procedural Guidelines for implementation of SEN-15-90, whether you have any objection to this determination.

If you have any questions regarding this matter, please contact Ed Skintik at (513) 648-3151.

  
J. Phil Hamric  
Manager

Attachment: As Stated

cc w/att:

R. S. Scott, EM-20, FORS  
K. A. Chaney, EM-424, TREV  
L. Harris, EM-431, TREV  
W. E. Woods, FERMCO/19  
Administrative Record Coordinator